

Table 2: Seq ID Number 1

Organism	62°	66°	72°
<i>Shigella boydii</i>	+	+	-
<i>Shigella dysenteriae</i>	+	+	-
<i>Shigella flexneri</i>	+	+	-
<i>Shigella sonnei</i>	+	+	+
<i>Escherichia coli</i>	+	+	+

IN THE CLAIMS:

Cancel claims 1-8, without prejudice or disclaimer of its subject matter.

Insert new claims 9 - 18.

-- 9. A method for determining the presence of an organism in a sample containing organisms of one or more taxonomic groups comprising:

- a. selecting a probe sequence from an operon common to two or more organisms of the taxonomic groups, wherein the probe sequence contains one or more base mismatches between at least one of the operons from the two or more organisms, and wherein the probe is capable of discriminating between organisms by hybridization under controlled stringency conditions at two or more wash temperatures at or above the probe's calculated or experimentally determined T_m or equivalent wash conditions;
 - b. hybridizing the probe to nucleic acid from the sample; and
 - c. determining the presence or absence of hybridizing nucleic acid.
9. The method of claim 8, wherein a probe of SEQ ID NO. 1 is used to discriminate between *Shigella* and *Escherichia*.
10. The method of claim 8, wherein a probe of SEQ ID NO. 2 is used to discriminate between *Shigella* and *Escherichia*.
11. The method of claim 8, wherein a probe of SEQ ID NO. 3 is used to discriminate between *Shigella* and *Escherichia*.

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cont
12. The method of claim 8, wherein a probe of SEQ ID NO. 4 is used to discriminate between *Shigella* and *Escherichia*.
 13. The method of claim 8, wherein a probe of any one of SEQ ID NO. 1-4 is used.
 14. The method of claim 8, wherein a RNA probe of any one of SEQ ID NO. 1-4 is used, wherein U substitutes for T in the sequence.
 15. The method of claim 8, wherein the operon selected is a ribosomal RNA operon.
 16. A nucleic acid probe comprising the sequence of one of SEQ ID NO. 1-4 or variants thereof, wherein the probe is capable of discriminating between organisms by hybridization under controlled stringency conditions at two or more wash temperatures at or above the probe's calculated or experimentally determined T_m or equivalent wash conditions.
 17. A nucleic acid probe of claim 16, wherein the probe is capable of distinguishing between species of *Shigella* in a hybridization assay.
 18. A nucleic acid probe of claim 16, wherein the probe is capable distinguishing between *Shigella* and *E. coli* in a hybridization assay.--

Remarks

Applicant requests reconsideration, entry of the amendment, and timely notice of allowance of all the pending claims. The change in the specification for Table 2 (page 13) is to correct a typographical error whereby a dash was left out to indicate lack of reactivity for *Shigella dysenteriae* under the column marked 72°. As the specification on page 14, lines 1-3 indicates, all four of the *Shigella* species (together with *Escherichia coli*) were tested and only *Shigella sonnei* (together with *Escherichia coli*), was positive at the observed T_m . As the data represented in revised Table 2 was present in the specification on page 14, lines 1-3, no new data are present in revised Table 2 added to the amendment.

New claims 9-18 reformat the original claims in a manner where the selection of the probe is more clearly defined. No new matter enters by these amendments. Applicant does not make the amendment to avoid any particular rejection. The new claims better define the subject matter without surrendering subject matter from the claims.

Rejection under 35 U.S.C. § 112, second paragraph

The PTO rejected claims 1-7 as indefinite. The new claims reintroduce the word "discriminating" into the claims, as discussed in the Examiner's Interview. The word